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(54) Title: DESIGN OF RE-TARGETED TOXIN CONJUGATES

(57) Abstract: The present invention provides a method for designing a re-targeted toxin conjugate for use in treating a medical condition or disease. Also provided, is the use of said conjugates in the manufacture of a medicament for treating medical conditions or diseases. The conjugates include a Targeting Moiety, which directs the conjugate to a desired target cell, and are characterised by a Targeting Moiety that increases exocytic fusion in the target cell. The present invention also provides methods for identifying agonists suitable for use as Targeting Moieties, and methods for preparing conjugates comprising said Targeting Moieties, to re-target a toxin to a cell of therapeutic interest. In particular, the present invention describes a method for designing a toxin conjugate, and describes therapeutic applications of said conjugates to inhibit or reduce cellular processes. Even more particularly, the present invention describes a method for designing toxin conjugates based upon non-cytotoxic toxins able to inhibit exocytosis, such as clostridial neurotoxins, and describes therapeutic applications of said conjugates to inhibit or reduce exocytosis (for example secretion, or the delivery of proteins such as receptors, transporters, and membrane channels to the plasma membrane of a cell).

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